

Appendix 1

Principles Of Sustainability

During the course of this comprehensive planning process, the concept of sustainability and how the Town might orient policies and practices more in its direction have been extensively explored. Groups of citizens and officials, in brainstorming how to pursue sustainability, noted that many of the early proposals emerging from the planning process already moved in the direction of a scientifically based framework of sustainability principles. In fact, the Town currently acts in a number of ways that strongly support those principles, LEXPRESS being a prominent long-established example, PAYT being a prominent new one. Using that framework of sustainability principles to further organize and clarify actions, participants in that brainstorming then identified additional supporting proposals.

To move in the direction of sustainability, activities need to be oriented to meet our human needs efficiently, fairly, and within the means of nature to support those needs. Natural systems—ecosystems, water, forests, and our atmosphere—are deteriorating at a rate faster than they can be renewed and replenished. That is occurring largely due to our increasing encroachment upon and degradation of those natural resources. Encroachment occurs through using up land, water, woods, and natural habitats faster than those can be recreated. Degradation occurs through our increasing release into nature of man-made substances, fossil fuel emissions, and other elements from below the Earth's surface faster than natural systems can reabsorb and break them down. At the same time, our consumption habits and patterns, as well as population as a whole, are increasing regionally, nationally, and globally. These two trends – deteriorating natural systems on the one hand, and rising consumption and population on the other – are like two sides of a funnel which are converging upon each other. To stabilize, if not reverse, these trends we need to find more efficient ways to meet human needs fairly, while reducing dependence upon those activities that are encroaching upon and degrading natural systems.

Four principles can guide our actions to move in this direction. Those principles are based upon several years of scientific discussion and consensus about what needs to happen to reorient human activity toward a sustainable society¹. The principles are:

1) Meet human needs fairly and efficiently, giving priority to basic needs: In what ways can we more efficiently and fairly meet the needs of citizens and the needs of the community – needs such as housing, jobs, food, mobility, municipal services, affordable taxes, and quality of life?

2) Reduce dependence upon fossil fuels, underground metals and minerals: In what ways can we meet needs for energy, heating and cooling buildings, moving about from home to

¹ The principles are based upon *The Natural Step* approach to sustainability, developed by a group of Swedish scientists led by an oncologist - Dr. Karl-Henrik Robert. This approach is also the basis of the guiding objectives of the American Planning Association's Policy Guide *Planning for Sustainability*.

work to shopping while reducing dependence upon fossil fuels? How can we change to practices that use fewer or no toxic and non-degradable substances such as mercury, lead, and cadmium?

3) *Reduce dependence upon chemicals and synthetic compounds:* In what ways can we landscape, garden, farm, build, use or create products and services at home and work, that reduce or eliminate use of chemical and synthetic substances?

4) *Reduce encroachment upon nature:* In what ways can we plan and design development that minimizes encroachment on nature including undeveloped land, woods, and wildlife habitat, and the quantity and quality of water?

Throughout the *Comprehensive Plan*, we have sought to respect and address those principles. Doing so is not just a locally altruistic gesture towards a global concern, but rather commonly involves a local action that is of local benefit as well as making some contribution at larger scales. For example, LEXPRESS modestly improves Lexington's air quality, but more importantly to many, it contributes to the mobility of some residents who can't drive, and by offering transportation choice enhances the quality of life in Lexington, while also serving more global concerns by reducing reliance on fossil fuels and chemicals. That conjunction of local and larger-than-local benefits can be noted throughout this *Plan* in actions that meet the sustainability principles.